

storing said configuration data received from said configuration data in storage means in said communication apparatus;

controlling subsequent communications by said communication apparatus over said network using the stored configuration data;

transmitting subsequent configuration data to said communication apparatus automatically from said configuration system;

storing said subsequent configuration data in said storage means; and

controlling subsequent communications by said communication apparatus over said network in accordance with the stored subsequent configuration data.

70. A method according to claim 69, including the steps of a user of said communication apparatus generating a request for further subsequent configuration data, and transmitting said request to said configuration system to initiate the transmission of subsequent configuration data.

71. A method according to claim 69, wherein said configuration data is transmitted over said network using a permanently open control channel associated with a plurality of data/voice channels.

72. A method according to claim 69, including the steps at said communication apparatus, of:
gathering information on the use of said service;
processing said information to generate summary information; and
periodically transmitting said summary information to a provider of said service.

73. A method according to claim 72, wherein said information is gathered in real time using a real time clock.

74. A method according to claim 72, including the step of supplying said information and/or said summary information to a user.

75. Communication apparatus for use in the method of claim 69 for interfacing a computer system to a communication network to access a service, the apparatus comprising:

first I/O means for connection to said computer system;

second I/O means for connection to the communication network;

storage means for storing unique identification information and configuration data for configuring the operation of the apparatus to access said service over said communication network;

processing means for controlling said second I/O means the first time said second I/O means is connected to said communication network to connect to a remote configuration system and to transmit said unique identification information in said storage means to the configuration system;

wherein said processing means is operable to control said second I/O means to initially receive configuration data from said configuration system, to store said initially received configuration data in said storage means, and to control access to said service by said computer system in accordance with said initially received configuration data; and

wherein said processing means is operable to control said second I/O means to receive subsequent configuration data automatically generated by said configuration system, to store said subsequent configuration data in said storage means, and to control subsequent access to said service by said computer system in accordance with said subsequent configuration data.

76. Communication apparatus according to claim 75, wherein said first I/O means comprises a local area network port for connection to a local area network.

77. Communication apparatus according to claim 75, wherein said second I/O means comprises an ISDN port for connection to one or more ISDN lines in said communications network.

78. Communication apparatus according to claim 77, wherein said second I/O means is adapted for connection to an ISDN line having a data channel (D) and a plurality of bearer channels (B).

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79. Communication apparatus according to claim 77, including at least one plain old telephone service (POTS) interface for connecting a telephone to the or each ISDN line.

80. Communication apparatus according to claim 75, including user interface means for allowing a user to generate a request for further subsequent configuration data, said processing means being responsive to said request to control said second I/O means to transmit said request to said configuration system to cause further subsequent configuration data to be transmitted to said apparatus.

81. Communication apparatus according to claim 75, wherein said second I/O port means comprises an ISDN interface for connection to one or more ISDN lines of an ISDN network having one or more data channels permanently connecting said ISDN interface to the ISDN network, and for receiving said subsequent configuration data using said data channel.

82. Communication apparatus according to claim 81, wherein said ISDN interface is adapted to receive said subsequent configuration data using one or more communication channels of the or each ISDN line.

83. Communication apparatus according to claim 75, wherein said second I/O means is adapted for connection to a dedicated data communication line.

84. Communication apparatus according to claim 75, wherein said processing means is operable to gather information on the use of said service by said computer system, to process said information to generate summary information, and to control said second I/O means to periodically transmit said summary information to a provider of said service.

85. Communication apparatus according to claim 84, including real time clock means, wherein said processing means is operable to use said real time clock means to gather real time information on the use of said service by said computer system.

86. Communication apparatus according to claim 84, including user interface means to allow a user of said communication apparatus access to said information.

87. Communication apparatus according to claim 86, wherein said user interface means comprises a further I/O means.

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88. Communication apparatus according to claim 86, wherein said user interface means comprises a computer program running on said processing means to allow a user of said computer system access to said summary information via said first I/O means.

89. Communication apparatus according to claim 88, wherein said user interface means comprises said processor means operating as a web server.

90. Communication apparatus according to claim 89, wherein said processing means is operable to gather and process said information using machine independent instructions for output to said user.

91. Communication apparatus according to claim 75, including encoding means for encoding said unique identification information before transmission by said second I/O means.

92. Communication apparatus according to claim 75, including decoding means for decoding said initial and subsequent configuration data received in encoded form by said second I/O means.

93. Communication apparatus according to claim 75, wherein said second I/O means includes a modem for connection to an analogue telephone line.

94. Communication apparatus for use in the method of claim 69 for communicating with a remote system over a network to access a service, the apparatus comprising:

I/O means for connection to the network;

storage means for storing unique identification information and configuration data for the operation of the communication apparatus to access said service;

processing means for controlling said I/O means the first time said I/O means is connected to said network to connect to a remote configuration system and to transmit said unique identification information thereto;

wherein said processing means is operable to control said I/O means to initially receive configuration data from said configuration system, to store said initially received configuration data in said storage means, and to control access to said service in accordance with said initially received configuration data; and

wherein said processing means is operable to control said I/O means to receive subsequent configuration data automatically generated by said configuration system, to store said

subsequent configuration data in said storage means, and to control subsequent access to said service in accordance with said subsequent configuration data.

95. Communication apparatus according to claim 94, including user interface means for allowing a user to generate a request for further subsequent configuration data, said processing means being responsive to said request to control said I/O means to transmit said request to said configuration system to cause further subsequent configuration data to be transmitted to said apparatus.

96. Communication apparatus according to claim 94, wherein said I/O port means comprises an ISDN interface for connection to one or more ISDN lines of an ISDN network having one or more data channels permanently connecting said ISDN interface to the ISDN network, and for receiving said subsequent configuration data using said data channel.

97. Communication apparatus according to claim 96, wherein said ISDN interface is adapted to receive said subsequent configuration data using one or more communication channels of the or each ISDN line.

98. Communication apparatus according to claim 94, wherein said processing means is operable to gather information on the use of said service by said computer system, to process said information to generate summary information, and to control said I/O means to periodically transmit said summary information to a provider of said service.

99. Communication apparatus according to claim 98, including real time clock means, wherein said processing means is operable to use said real time clock means to gather real time information on the use of said service.

100. Communication apparatus according to claim 98, including user interface means to allow a user of said apparatus access to said information.

101. Apparatus according to claim 100, wherein said user interface means comprises a computer program running on said processing means to allow access to said summary information.

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102. Apparatus according to claim 101, wherein said processing means is operable to gather and process said information using machine independent instructions for output to said user.

103. Apparatus according to claim 94, including encoding means for encoding said unique identification information before transmission by said I/O means.

104. Apparatus according to claim 94, including decoding means for decoding configuring received in encoded form by said I/O means.

105. A configuration system for use in the method of claim 69 and for connection to said communication apparatus according to claim 75 via a communication network, said configuration system comprising:

I/O means for connection to said communication network, and for receiving said unique identification information from said communication apparatus; and

configuration processing means responsive to said unique identification information to determine initial configuration data for said communication apparatus;

wherein said I/O means is adapted to transmit said determined configuration data to said communication apparatus over said communications network; and

wherein said configuration processing means is operative to automatically determine updated configuration data and to cause said I/O means to transmit said updated configuration data to said communication apparatus.

106. A configuration system according to claim 105, wherein said configuration processing means is operative to determine said configuration data using said unique identification information, information on the user or users of said communication apparatus, and information on the level of service required by the user or users.

107. A configuration system according to claim 106, including obtaining means for obtaining said information on the user or users, and said information on the level of service required by the user or users.

108. A configuration system according to claim 107, wherein said obtaining means is adapted to obtain said information on the user or users, said information on the level of service required by the user or users, and expected unique identification information prior to receipt of said unique identification information by said I/O means, and said configuration processing means is

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operative to determine said configuration data before receipt of said unique identification information using the information obtained by said obtaining means, to compare the received unique identification information with said expected unique identification, and to cause said I/O means to transmit the configuration data if there is a match in the comparison.

109. A configuration system according to claim 108, including means for storing a plurality of sets of said configuration data for a corresponding plurality of said expected unique identification information for a corresponding plurality of said communication apparatuses, wherein said configuration system can connect to a plurality of said communication apparatuses.

110. A configuration system according to claim 105, wherein said configuration processing means is responsive to a request for configuration data received by said I/O means from said communication apparatus to determine configuration data and control said I/O means to transmit said determined configuration data.

111. A configuration system according to claim 105, including decoding means for decoding encoded unique identification information received from said apparatus.

112. A configuration system according to claim 109, including encoding means for encoding said configuration data for transmission to said apparatus.

113. Apparatus for interfacing a computer system to a communication line to access a service, the apparatus comprising:

- first I/O means for connection to said computer system;
- second I/O means for connection to said communication line;
- processing means for gathering information on the use made of said service by said computer system, for processing said information to generate processed information, and for controlling said second I/O means to transmit said processed information to a remote management system; and
- storage means for storing said information and/or said processed information.

114. Apparatus according to claim 113, including clock means, said processing means being responsive to said clock means to gather said information with respect to time, to process said information periodically, and to cause said second I/O means to transmit said processed information periodically to said remote management system.

116. Apparatus according to claim 115, wherein said user interface means comprises a further I/O means.

117. Apparatus according to claim 115, wherein said user interface means comprises a computer program running on said processing means to allow a user of said computer system access to said information and/or said processed information via said first I/O means.

118. Apparatus according to claim 117, wherein said user interface means comprises said processor means operating as a Web server.

119. Apparatus according to claim 118, wherein said processing means is operable to gather and process said information for output to said user using machine independent instructions.

120. Apparatus according to claim 113, wherein said second I/O means is adapted to receive configuration data from said management system, and said processing means is operative to process said information in accordance with said configuration data.

121. Apparatus for communicating with a remote system over a network to access a service, the apparatus comprising:

I/O means ~~for~~ connection to the network:

processing means for gathering information on the use made of said service by said apparatus, for processing said information to generate processed information, and for controlling said I/O means to transmit said processed information to a remote management system; and storage means for storing said information and/or said processed information.

122. Apparatus according to claim 121, including clock means, said processing means being responsive to said clock means to gather said information with respect to time, to process said information periodically, and to cause said I/O means to transmit said processed information periodically to said remote management system.

123. Apparatus according to claim 121, including user interface means to allow a user of said apparatus access to said information and/or said processed information in said storage means.

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124. Apparatus according to claim 123, wherein said user interface means comprises a computer program running on said processing means to allow a user access to said information and/or said processed information.

125. Apparatus according to claim 124, wherein said processing means is operable to gather and process said information for output to said user using machine independent instructions.

126. Apparatus according to claim 123, wherein said I/O means is adapted to receive configuration data from said management system, and said processing means is operative to process said information in accordance with said configuration data.

127. A method of monitoring communications between a communication apparatus and a remote system over a network to access a service, the method comprising the steps at said communication apparatus, of:

gathering information on the use of said service by said communication apparatus;
processing said information to generate processed information; and
transmitting said processed information to a remote management system.

128. A method according to claim 127, wherein said information is gathered with respect to time, processed periodically, and periodically transmitted to said remote management system.

129. A method according to claim 127, including the step of supplying said information and/or said processed information to a user.

130. Communication apparatus for the performance of communication processes over a network, comprising:

means for transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

means for receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;

means for re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration

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condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition; and

means operable on command received from said network for:
receiving second reconfiguration data via said network;
storing said second reconfiguration data in said communication apparatus; and
further re-configuring said communication apparatus in accordance with said second reconfiguration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

131. Communication apparatus for the performance of communication processes over a network, comprising:

means for transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

means for receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;

means for re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition;

means for receiving second reconfiguration data via said network and storing said second reconfiguration data in said communication apparatus, upon command received from said network; and

means for further re-configuring said communication apparatus in accordance with said second reconfiguration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

132. Server apparatus for communication via a network with a plurality of reconfigurable communication devices, comprising:

means for storing a plurality of different first reconfiguration data relating to different said communication devices;

means responsive to receipt of unique identification data from a said communication device for transmitting to said communication device via said network said first reconfiguration data relating thereto for permitting said communication device to be placed in a first reconfiguration condition defined by said first reconfiguration data; and

means for transmitting to said communication devices via said network second reconfiguration data for causing said communication devices to be further reconfigured into second reconfiguration conditions in accordance with said second reconfiguration data, on command of said server apparatus.

133. A process for configuring a communication apparatus for the performance of communication processes over a network, comprising:
transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;

re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration

condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition; and

upon command received from said network:

receiving second reconfiguration data via said network;

storing said second reconfiguration data in said communication apparatus, and

further re-configuring said communication apparatus in accordance with said second reconfiguration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

134. A process for configuring a communication apparatus for the performance of communication processes over a network, comprising:

transmitting, in accordance with a first configuration condition of said communication apparatus, unique identification information over said network from said communication apparatus to a remote configuration system for obtaining first reconfiguration data from said remote configuration system;

receiving said first reconfiguration data from said remote configuration system and storing said received first reconfiguration data in said communication apparatus;

re-configuring said communication apparatus in accordance with said stored first reconfiguration data to place said communication apparatus in a first reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said first reconfiguration condition;

receiving second reconfiguration data via said network and storing said second reconfiguration data in said communication apparatus, upon command received from said network; and

further re-configuring said communication apparatus in accordance with said second reconfiguration data to place said communication apparatus in a second reconfiguration condition to permit said communication apparatus to perform communication processes over said network in accordance with said second reconfiguration condition.

135. A process for enabling reconfiguration of a plurality of reconfigurable communication devices operable for performing communication operations over network, comprising:

storing at server means a plurality of different first reconfiguration data relating to different said communication devices;

in response to receipt by the server means of unique identification data from a said communication device transmitting to said communication device via said network said first reconfiguration data relating thereto for permitting said communication device to be placed in a first reconfiguration condition defined by said first reconfiguration data; and

on command of the server means, transmitting to said communication devices via said network second reconfiguration data for causing said communication devices to be further reconfigured into second reconfiguration conditions in accordance with said second reconfiguration data.

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